

ECE571: Advanced Microprocessor Design – Homework 2
Fall 2019

Due: Thursday 19 September 2019, 2:00pm

Create a document that contains the data and answers described in the sections below. A .pdf or .txt file is preferred but I can accept MS Office or Libreoffice format if necessary.

1. Read the paper *Producing Wrong Data Without Doing Anything Obviously Wrong!* by Mytkowicz, Diwan, Hauswith and Sweeney (ASPLOS 2009).

<https://users.cs.northwestern.edu/~robby/courses/322-2013-spring/mytkowicz-wrong-data.pdf>

2. We will discuss this paper in class on Thursday the 19th so you might want to wait until reading it until close to that time.

3. Answer the following questions:

- (a) What is measurement bias?
- (b) Why can changing the UNIX environment size change program performance?
- (c) What are two of the suggested ways that can be used to avoid measurement bias?
- (d) In Homework 1 we did measurements with the link order reversed. Did you see any differences in the results that might indicate measurement bias?

4. Submitting your work.

- Create the document containing the answers to the questions asked.
- Please make sure your name appears in the document.
- e-mail the file to me by the homework deadline.